

Practical 2

Aim:(i) Create the below given table and insert the data accordingly.

Create Table Job (job_id, job_title, min_sal, max_sal)

Code :

```
create table job(job_id varchar2(15),job_title varchar2(30), min_sal number(7,2),max_sal
number(7,2))
```

```
insert into job values('it_prog','Programmer',4000,10000)
```

```
insert into job values('mk_mgr','Marketing manager',9000,15000)
```

```
insert into job values('fi_mgr','Finance manager',8200,12000)
```

```
insert into job values('fi_acc','Account',4200,9000)
```

```
insert into job values('lec','Lecturer',6000,17000)
```

```
insert into job values('comp_op','Computer Operator',1500,3000)
```

```
select * from job
```

Output:

JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
it_prog	Programmer	4000	10000
mk_mgr	Marketing manager	9000	15000
fi_mgr	Finance manager	8200	12000
fi_acc	Account	4200	9000
lec	Lecturer	6000	17000
comp_op	Computer Operator	1500	3000

Create table Employee (emp_no, emp_name, emp_sal, emp_comm, dept_no, l_name, dept_name, job_id, location, manager_id, hiredate) and insert following values in the table Employee.

Code:

```
create table employee(emp_no number(3),emp_name varchar2(30),emp_sal
number(8,2),emp_comm number(6,1),dept_no number(3), l_name varchar2(30), dept_name
varchar2(30), job_id varchar2(15), location varchar2(15), manager_id number(5), hiredate
date)
```

```
insert into employee values(101,'Smith',800,"20,'shah','machine
learing','fi_mgr','toronto',105,'09-aug-96')
```

```
insert into employee values(102,'Snehal',1600,300,25,'gupta','data science','lec','las
vegas','14-mar-96')
```

```
insert into employee values(103,'Adama',1100,0,20,'wales', 'machine learing',
'mk_mgr','ontario', 105, '30-nov-95')
```

```
insert into employee values(104,'Aman',3000,",15,'sharma','virtual
reality','comp_op','mexico',12,'02-oct-97')
```

insert into employee values(105,'Anita',5000,50000,10,'patel','big data analysis','comp_op','germany', 107,'01-jan-98')

insert into employee values(106,'Sneha',2450,24500,10,'joseph','big data analytics','fi_acc','melbourne', 105,'26-sep-97')

insert into employee values(107,'Anamika',2975,",30,'jha','artificial intelligence','it_prog','new york', ",'15-jul-97')

select * from employee

Output:

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
101	Smith	800	-	20	shah	machine learning	fi_mgr	toronto	105	09-AUG-96
102	Snehal	1600	300	25	gupta	data science	lec	las vegas	-	14-MAR-96
103	Adama	1100	0	20	wales	machine learning	mk_mgr	ontario	105	30-NOV-95
104	Aman	3000	15	12	sharma	virtual reality	comp_op	mexico	2	02-OCT-97
105	Anita	5000	50000	10	patel	big data analytics	comp_op	germany	107	01-JAN-98
106	Sneha	2450	24500	10	joseph	big data analytics	fi_acc	melbourne	105	26-SEP-97
107	Anamika	2975	-	30	jha	artificial intelligence	it_prog	new york	-	15-JUL-97

Create table deposit(a_no,cname,bname,amount,a_date) and Insert following values in the table deposit.

Code:

create table deposit(a_no varchar2(5), cname varchar2(15), bname varchar2(10), amount number(7,2), a_date date)

insert into deposit values(101,'Anil','andheri',7000,'01-jan-06')

insert into deposit values(102,'Sunil','virar',5000,'15-jul-06')

insert into deposit values(103,'Jay','villeparle',6500,'12-mar-06')

insert into deposit values(104,'Vijay','andheri',8000,'17-sep-06')

insert into deposit values(105,'Keyur','dadar',7500,'19-nov-06')

insert into deposit values(106,'Mayur','borivali',5500,'21-dec-06')

select *from deposit

Output:

A_NO	CNAME	BNAME	AMOUNT	A_DATE
101	Anil	andheri	7000	01-JAN-06
102	Sunil	virar	5000	15-JUL-06
103	Jay	villeparle	6500	12-MAR-06
104	Vijay	andheri	8000	17-SEP-06
105	Keyur	dadar	7500	19-NOV-06
106	Mayur	borivali	5500	21-DEC-06

Create table borrow (loanno, cname, bname, amount).

Code:

Create table borrow (loanno varchar2(5), cname varchar2(15), bname varchar2(10), amount number(7,2))

Output:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPOSIT	A_NO	Varchar2	5	-	-	-	✓	-	-
	CNAME	Varchar2	15	-	-	-	✓	-	-
	BNAME	Varchar2	10	-	-	-	✓	-	-
	AMOUNT	Number	-	7	2	-	✓	-	-
	A_DATE	Date	7	-	-	-	✓	-	-

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Perform following queries

(1) Retrieve all data from employee, jobs and deposit.

Query: select *from job

Output:

```
User: 22DCE006
Home > SQL > SQL Commands

 Autocommit Display 10
select *from job

Results Explain Describe Saved SQL History



| JOB_ID  | JOB_TITLE         | MIN_SAL | MAX_SAL |
|---------|-------------------|---------|---------|
| it_prog | programmer        | 4000    | 10000   |
| mk_mgr  | marketing manager | 9000    | 15000   |
| fi_mgr  | finance manager   | 8200    | 12000   |
| fi_acc  | account           | 4200    | 9000    |
| lec     | lecturer          | 6000    | 17000   |
| comp_op | computer operator | 1500    | 3000    |


6 rows returned in 0.02 seconds CSV Export
```

Query: select *from employee

Output:

User: 22DCE006

Home > SQL > SQL Commands

 Autocommit Display 10

select *from employee

[Results](#) [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
101	smith	800	-	20	shah	machine learning	fi_mgr	toronto	105	09-AUG-96
102	snehal	1600	300	25	gupta	data science	lec	las vegas	-	14-MAR-96
103	adama	1100	0	20	wales	machine learning	mk_mgr	ontario	105	30-NOV-95
104	aman	3000	-	15	sharma	virtual reality	comp_op	mexico	12	02-OCT-97
105	anita	5000	50000	10	patel	big data analytics	comp_op	germany	107	01-JAN-98
106	sneha	2450	24500	10	joseph	big data analytics	fi_acc	melbourne	105	26-SEP-97
107	anamika	2975	-	30	jha	artificial intelligence	it_prog	new york	-	15-JUL-97

7 rows returned in 0.00 seconds

[CSV Export](#)**Query:** select *from deposit**Output:**

User: 22DCE006

Home > SQL > SQL Commands

 Autocommit Display 10

select *from deposit

[Results](#) [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

A_NO	CNAME	BNAME	AMOUNT	A_DATE
101	anil	andheri	7000	01-JAN-06
102	sunil	virar	5000	15-JUL-06
103	jay	villepark	6500	12-MAR-06
104	vijay	andheri	8000	17-SEP-06
105	keyur	dadar	7500	19-NOV-06
106	mayur	borivali	5500	21-DEC-06

6 rows returned in 0.00 seconds

[CSV Export](#)

(2) Give details of account no. and deposited rupees of customers having account opened between dates 01-01-06 and 25-07-06.

Query: select a_no,amount from deposit where a_date between '01-jan-06' and '25-jul-06'

Output:

User: 22DCE006

Home > SQL > **SQL Commands**

Autocommit Display 10 ▾

```
select a_no,amount from deposit where a_date between '01-jan-06' and '25-jul-06'
```

Results Explain Describe Saved SQL History

A_NO	AMOUNT
101	7000
102	5000
103	6500

3 rows returned in 0.00 seconds

[CSV Export](#)

(3) Display all jobs with minimum salary is greater than 4000.

Query: select *from job where min_sal>4000

Output:

User: 22DCE006

Home > SQL > **SQL Commands**

Autocommit Display 10 ▾

```
select *from job where min_sal>4000
```

Results Explain Describe Saved SQL History

JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
mk_mgr	marketing manager	9000	15000
fi_mgr	finance manager	8200	12000
fi_acc	account	4200	9000
lec	lecturer	6000	17000

4 rows returned in 0.00 seconds

[CSV Export](#)

(4) Display name and salary of employee whose department no is 20. Give alias name to name of employee.

Query: select emp_name "Employee Name", emp_sal "Employee Salary" from employee where dept_no=20

Output:

User: 22DCE006
 Home > SQL > SQL Commands

Autocommit

```
select emp_name "Employee Name", emp_sal "Employee Salary" from employee where dept_no=20
```

Employee Name	Employee Salary
smith	800
adama	1100

2 rows returned in 0.00 seconds

(5) Display employee no, name and department details of those employee whose department lies in (10,20).

Query: select emp_no,emp_name,dept_no,dept_name from employee where dept_no between 10 and 20

Output:

User: 22DCE006
 Home > SQL > SQL Commands

Autocommit

```
select *from job
select *from job where min_sal>4000

create table employee (emp_no number(3), emp_name varchar2(30), emp_sal number(8,2), emp_comm number(6,1), dept_no number(3), l_name varchar(30), dept_name varchar(30), job_id varchar(15), location varchar(15), manager_id number(5), hiredate date)
insert into employee values(101,'smith',800,null,20,'shah','machine learning','f1_mgr','toronto',105,'09-aug-96')
insert into employee values(102,'snehal',1000,300,25,'gupta','data science','lsc','las vegas',null,'14-mar-96')
insert into employee values(103,'adama',1100,0,20,'wales','machine learning','mk_mgr','omaha',105,'01-nov-96')
insert into employee values(104,'aman',1200,500,15,'singh','data science','mk_mgr','omaha',105,'15-oct-97')
insert into employee values(105,'anita',5000,50000,10,'patel','big data analytics','comp_op','germany',107,'01-jan-98')
insert into employee values(106,'sneha',2450,24500,10,'joseph','big data analytics','f1_acc','melbourne',105,'26-sep-97')
insert into employee values(107,'anamika',2975,null,30,'jha','artificial intelligence','it_prog','new york',null,'15-jul-97')
select *from employee
select emp_name,"Employee Name",emp_sal "Salary" from employee where dept_no=20
select emp_no,emp_name,dept_no,dept_name from employee where dept_no between 10 and 20
create table deposit(a_no varchar2(5),cname varchar2(15),bname varchar2(10),amount number(7,2),a_date date)
insert into deposit values(101,'anil','andheri',7000,'01-jan-06')
```

EMP_NO	EMP_NAME	DEPT_NO	DEPT_NAME
101	smith	20	machine learning
103	adama	20	machine learning
104	aman	15	virtual reality
105	anita	10	big data analytics
106	sneha	10	big data analytics

5 rows returned in 0.00 seconds

(6) Display the non-null values of employees.

Query: select *from employee where emp_comm is not null

Output:

User 22DCE006
 Home > SQL > SQL Commands
 Autocommit Display 10
 select *from employee where emp.comm is not null

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
102	snehal	1800	300	25	gupta	data science	lec	las vegas	-	14-MAR-96
103	adama	1100	0	20	wales	machine learning	mk_mgr	ontario	105	30-NOV-95
105	anita	5000	50000	10	patel	big data analytics	comp_op	germany	107	01-JAN-98
106	sneha	2450	24500	10	joseph	big data analytics	ft_acc	melbourne	105	26-SEP-97

4 rows returned in 0.00 seconds [CSV Export](#)

(7) Display name of customer along with its account no (both columns should be displayed as one) whose amount is not equal to 8000 Rs.

Query: select cname ||' '|| a_no "Name and AccountNumber"from deposit where amount!=8000

Output:

User 22DCE006
 Home > SQL > SQL Commands
 Autocommit Display 10
 select cname ||' '|| a_no "Name and AccountNumber"from deposit where amount!=8000

Name And AccountNumber
anil 101
sunil 102
jay 103
keyur 105
mayur 106

5 rows returned in 0.00 seconds [CSV Export](#)

(8) Display the content of job details with minimum salary either 2000 or 4000.

Query: select *from job where min_sal = 2000 or min_sal = 4000

Output:

User 22DCE006
 Home > SQL > SQL Commands
 Autocommit Display 10
 select *from job where min_sal = 2000 or min_sal = 4000

JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
it_prog	programmer	4000	10000

1 rows returned in 0.00 seconds [CSV Export](#)

To study various options of LIKE predicate

(1) Display all employee whose name start with ‘A’ and third character is “a”.

Query: select *from employee where emp_name like 'a_a%'

Output:

User 22DCE006
 Home > SQL > SQL Commands
 Autocommit Display 10
`select *from employee where emp_name like 'a_a%'`

Results Explain Describe Saved SQL History

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
103	adama	1100	0	20	wales	machine learning	mk_mgr	ontario	105	30-NOV-95
104	amen	3000	-	15	sharma	virtual reality	comp_op	mexico	12	02-OCT-97
107	anamika	2975	-	30	jha	artificial intelligence	it_prog	new york	-	15-JUL-97

3 rows returned in 0.00 seconds CSV Export

(2) Display name, number and salary of those employees whose name is 5 characters long and first three characters are ‘Ani’.

Query: select emp_name,emp_no,emp_sal from employee where emp_name like'ani__'

Output:

User 22DCE006
 Home > SQL > SQL Commands
 Autocommit Display 10
`select emp_name,emp_no,emp_sal from employee where emp_name like'ani__'`

Results Explain Describe Saved SQL History

EMP_NAME	EMP_NO	EMP_SAL
anita	105	5000

1 rows returned in 0.00 seconds CSV Export

(3) Display all information of employee whose second character of name is either ‘M’ or ‘N’.

Query: select *from employee where emp_name like '_m%' or emp_name like'_n%'

Output:

User: 22DCE006
Home > SQL > SQL Commands

```

 Autocommit Display 10 ▾
Insert into employee values(105,'anita',50000,50000,10,'patel','big data analytics','comp_op',germany,107,'01-jan-98')
Insert into employee values(106,'sneha',2450,24500,10,'joseph','big data analytics','fl_acc','melbourne',105,'26-sep-97')
Insert into employee values(107,'anamika',2975,null,30,'jha','artificial intelligence','it_prog','new_york',null,'15-jul-97')
Select * from employee
Select emp_name, "Employee Name", emp_sal "Employee Salary" from employee where dept_no=20
Select emp_no,emp_name,dept_no,dept_name from employee where dept_no between 10 and 20
Select * from employee where emp_name is not null and Manager_id is not Null
Select * from employee where emp_name like 'a%'
Select emp_name,emp_no,emp_sal from employee where emp_name like 'ani%'
Select * from employee where emp_name like 'an%' or emp_name like 'nk%'
Create Table deposit(a_no varchar2(5), cname varchar2(15), bname varchar2(10) ,amount number(7,2),a_date date)
Insert into deposit values(101,'anil','andheri',7000,'01-jan-06')
Insert into deposit values(102,'sunil','virar',8000,'15-jul-06')
Insert into deposit values(103,'jay','villepark',6500,'12-mar-06')

```

Results Explain Describe Saved SQL History

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
101	smith	800	-	20	shah	machine learning	it_mg	Toronto	105	01-JAN-98
102	snehal	1800	300	25	gupta	data science	it_c	las vegas	-	14-APR-98
104	anita	3000	-	15	sharma	virtual reality	comp_op	mexico	12	02-OCT-07
105	sneha	6000	50000	10	patel	big data analytics	comp_op	germany	107	01-JAN-98
106	anita	2450	24500	10	joseph	big data analytics	fl_acc	melbourne	105	26-SEP-07
107	anamika	2075	-	30	jha	artificial intelligence	it_prog	new_york	-	15-JUL-97

6 rows returned in 0.00 seconds [CSV Export](#)

(4) Find the list of all customer name whose branch is in ‘andheri’ or ‘dadar’ or ‘virar’.

Query: select cname from deposit where bname='andheri' or bname='virar' or bname='dadar'

Output:

User: 22DCE006
Home > SQL > SQL Commands

```

 Autocommit Display 10 ▾
Insert into deposit values(102,'sunil','virar',8000,'15-jul-06')
Insert into deposit values(103,'jay','villepark',6500,'12-mar-06')
Insert into deposit values(104,'vijay','andheri',8000,'17-sep-06')
Insert into deposit values(105,'keyur','dadar',7500,'19-nov-06')
Insert into deposit values(106,'mayur','borivali',5500,'21-dec-06')
Select * from deposit
Select a_no,amount from deposit where a_date between '01-jan-06' and '25-jul-06'
Select cname || ' ' || a_no "Name and AccountNumber" from deposit where amount!=8000
Select cname from deposit where bname='andheri' or bname='virar' or bname='dadar'

Create table borrow (loanno varchar2(5), cname varchar2(15), bname varchar2(10), amount number(7,2))
Select * from borrow

```

Results Explain Describe Saved SQL History

CNAME
anil
sunil
vijay
keyur

4 rows returned in 0.00 seconds [CSV Export](#)

(5) Display the job name whose first three character in job id field is ‘FI_’.

Query: select job_title from job where job_id like 'fi\$_%' escape '\$'

Output:

User: 22DCE006

Home > SQL > **SQL Commands**
 Autocommit Display 10

```
select job_title from job where job_id like 'fi$_%' escape '$'
```

[Results](#) [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

JOB_TITLE
finance manager
account

2 rows returned in 0.00 seconds

[CSV Export](#)

(6) Display the title/name of job who's last three character are '_MGR' and their maximum salary is greater than Rs 12000.

Query: select job_title from job where job_id like '%_mgr' and max_sal>12000

Output:

User: 22DCE006

Home > SQL > **SQL Commands**
 Autocommit Display 10

```
select job_title from job where job_id like '%_mgr' and max_sal>12000
```

[Results](#) [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

JOB_TITLE
marketing manager

1 rows returned in 0.00 seconds

[CSV Export](#)

(7) Display the non-null values of employees and also employee name second character should be 'n' and string should be 5-character long.

Query: select *from employee where emp_comm is not null and emp_name like '_n__'

Output:

User 22DCE006
Home > SQL > SQL Commands

Autocommit Display 10

```
select *from employee where emp_comm is not null and emp_name like '_n_a'
```

Results Explain Describe Saved SQL History

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
105	anita	5000	50000	10	patel	big data analytics	comp_op	germany	107	01-JAN-98
106	sneha	2450	24500	10	joseph	big data analytics	fi_acc	melbourne	105	26-SEP-97

2 rows returned in 0.00 seconds [CSV Export](#)

(8) Display the null values of employee and also employee name's third character should be 'a'.

Query: select *from employee where emp_comm is null and emp_name like '__a%'

Output:

User 22DCE006
Home > SQL > SQL Commands

Autocommit Display 10

```
select *from employee where emp_comm is null and emp_name like '__a%'
```

Results Explain Describe Saved SQL History

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
104	aman	3000	-	15	sharma	virtual reality	comp_op	mexico	12	02-OCT-97
107	anamika	2975	-	30	jha	artificial intelligence	it_prog	new york	-	15-JUL-97

2 rows returned in 0.00 seconds [CSV Export](#)

(9) What will be output if you are giving LIKE predicate as '%_%' ESCAPE '\'

Query: select *from job where job_id like '%_%' escape '\'

Output:

User 22DCE006
Home > SQL > SQL Commands

Autocommit Display 10

```
select *from job where job_id like '%\_%' escape '\'
```

Results Explain Describe Saved SQL History

JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
it_prog	programmer	4000	10000
mk_mgr	marketing manager	9000	15000
fi_mgr	finance manager	8200	12000
fi_acc	account	4200	9000
comp_op	computer operator	1500	3000

5 rows returned in 0.00 seconds [CSV Export](#)

CONCLUSION: From this practical, I learned about the use of like predicate and between keyword. Also displaying non null values with the logic of escape characters.

Staff Signature:

Grade:

Remarks by the Staff: